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Role Identities in Narratives: Continuing the Story

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This forum provides us with helpful resources to continue our thinking about the important issue of shifting identities for teachers in transition. As we read these accounts, both similar and different aspects attended by each of the contributors fascinated us. We were intrigued to read how they interpreted our work and related our narrative of Tanya's transition to their own stories of transition and the literature related to identities, particularly for female scientists. Karen Phillips found that Tanya's experiences mirrored several aspects of her own transition from chemist to university teacher, and recognized that she tells different stories in different contexts. While Tanya's revelation of negative reactions from her former (female) colleague echoed loudly for Michael Bowen, a former field biologist, he did not perceive a difference in status between teaching and his biological work in the field. This he attributed to his family background and his work with the public. After reading Susan Kirch's critique we wonder how gender might account for the different transitions experienced by Michael and Tanya. Collectively, the forum has helped us become more *wakeful* (see Clandinin & Connelly, 2000) or aware of how readers might resonate with the stories told.

That the text of our narrative inquiry resonated with at least two of the reviewers has satisfied what we value most in narrative inquiry – to awaken readers' stories of related experiences that might reinforce practices they value or help transform those practices they identify needing change, and/or to gain insight into unfamiliar life experiences. Interestingly, Clandinin and Connelly (2000) noted "many narrative studies

are judged to be important when they become literary texts to be read by others not so much for the knowledge they contain but for the vicarious testing of life possibilities by readers of the research that they permit" (p. 42).

Criteria for judging narrative inquiry are under development (Clandinin & Connelly, 2000). So we need to exercise some caution in imposing criteria developed from one style of qualitative research to another without due recognition of subtle differences between the styles. In narrative inquiry, Riessman (2002) offered persuasiveness, correspondence, coherence, and pragmatic use as ways for approaching validation in narrative work while Clandinin and Connelly (2000) suggested the following criteria to consider in judging narrative inquiry: explanatory and invitational quality, authenticity, adequacy, and plausibility. To establish shared meanings of such criteria is another challenge facing researchers, particularly for those who move across different research communities. In any case, it might be wise to revisit the purposes of narrative inquiry and descriptions of how it might be conducted to help with the appreciation of the meaning of stated criteria and their (technical) application. For example, Elbaz-Luwisch (1997) commented, narrative researchers:

- aspire to collaborate with participants to produce multi-voiced texts (see also Brockmeier & Harré, 1997)
- challenge the prevailing logistical view which underlies technical rationality of much educational research
- accept that educational practice is changed from the inside, by practitioners working together, often with the help of researchers
- do not aspire to generalization

- do not promise immediate practical benefits
- attempt to gain increased understanding of the multitude of meanings that are created by practitioners and by researchers working together. (pp. 76-78)

Unsurprisingly, the interpretations reported in articles authored by narrative researchers tend to be believable partial truths, requiring the text to be open to alternative interpretations that might lead to greater understanding of the issues but not certainty (Riessman, 2002). The other contributors to this forum, who commented on our article, appeared to find our interpretations believable, and were forthcoming in offering alternative interpretations – suggesting our achievement of an invitational text that welcomed alternative readings.

There is always more to tell in narrative inquiry, and new stories are generated from further experiences in the field – our texts will continue to be incomplete and the temporal nature of our interpretations will mean they are constantly under revision. Tanya has now completed her first six months of full-time science teaching so we are able to update our continuing inquiry into professional transitions. Further reading also has enhanced our capacity to draw out salient relationships between emotions and identities through stories of professional practice. Before interpreting Tanya's new narrative artifacts, we highlight Jonathon H. Turner's (2002) contribution to role identities in narratives.

When we first shared a part of our original article with a teacher education colleague, who we will call Brenda, an interesting conversation ensued between Steve and Brenda in Steve's office. Brenda could not accept that individuals had multiple

identities, even though she accepted that the literature increasingly (but wrongly) made reference to *identities* rather than *identity*. When Steve listed the various identities that we identified in Tanya's stories, Brenda argued that these were roles that she performed, and these were different from her core self or identity. According to Brenda, her own core values and beliefs remained constant across the contexts or fields in which she participated in various roles. Wakefully, Steve inscribed: identities $=^{?}$ roles on his whiteboard towards the end of the conversation to remind him that this issue remained unresolved and it needed to be addressed in subsequent work. After his recent reading of Turner (2002), Steve may be closer to erasing the inscription.

Turner (2002) argued that *self* operates at three hierarchically structured levels: (1) *core self* or those trans-situational cognitions and feelings about who a person is – that which Brenda recognized as one's identity; (2) *sub-identities* or cognitions and feelings about self in fields like school, university, or Tanya's former laboratory; and (3) *role identities* or cognitions and feelings about self in particular roles such as maintaining order within a classroom or conducting a particular laboratory procedure. While we all have needs to confirm all three levels of identity, "by far the most important is the core because this level of self activates the most intense emotions about one-self as a person and about how one should be treated by others" (p. 101). This could explain why Tanya became emotional when she retold the story of her colleague's disbelief about her career-change. Tanya was a high achiever who saw herself as a successful person (core self). In her laboratory roles in her former career, Tanya's core self was confirmed repetitively. As a student teacher, while her role identities were not being confirmed as they once were, her core self as a successful person became vulnerable and, when she recalled the

comments from her colleague, her core self through her new role identity was denied confirmation which precipitated the involuntary emotional reaction.

Tanya took up a position in the school in which she successfully completed her internship (i.e., an independent girls' school that was a different school from her first placement as a student teacher). We decided to follow up our previous work together on sharing stories in different contexts to identify how Tanya's role- and sub-identities were realized in her classroom encounters with students, and to what extent her scientist and science teacher identities could be identified in these encounters? We were also hopeful that we could scrutinize Turner's theory in this context. Accordingly, three lessons were videotaped. Two of these were recorded in Tanya's Year 8 science classes, while the third was recorded in her Year 11 biology class. These recordings provided stimuli for Tanya's recollection of what she was doing and thinking at particular moments **she** identified as salient to our interests in identities. Steve conducted these stimulated recall interviews in his office. Once completed, Tanya transcribed the audio-recordings in her capacity as research assistant for the project during her summer vacation. A total of 66 pages were transcribed from the tapes. However, Tanya was much more than a research assistant or checker of data accuracy because, as she transcribed the interviews, she excluded several excerpts that she deemed too sensitive and/or unrelated to our research focus – a role Tanya renegotiated with Steve after the stimulated recall interviews. In other words, **Tanya decided which data could be interpreted for the purposes of our research** – a much more powerful position than was acknowledged by Susan Kirch in her contribution to the forum (cf. tactical authenticity). Although a full analysis of these data is beyond the scope of our contribution to this forum, we will share our brief and

preliminary interpretation of two related narrative artifacts – one interview excerpt and one story.

Towards the end of our third stimulated recall interview that focused on the Year 11 biology lesson, Tanya paused the tape where the class was discussing antibodies. In class, Tanya admitted that she had made antibodies and proceeded to elaborate on the different ways they could be engineered (in fact, how she had engineered and tested monoclonal antibodies). At this point in the interview, Tanya commented:

> So this is very much me the scientist and just telling them how in a lab you would make antibodies, because I did make actual physical antibodies by injecting them into sheep and so I'm telling them all about it…. I do generally tell them real-life applications, so that they know how things are made – and this always generates a lot of questions, because they like it.

Tanya advanced the tape again and we saw animated questions from students as Tanya explained to the class: "yeah my protein, I was the first one to find that my protein did a specific thing." As we see below in Tanya's story, the students then quizzed Tanya about her qualifications and expressed excitement that she had a PhD, to which Tanya responded in the interview: "Is that for real? ((laughs, rewinds tape)) She goes, 'is that on?' They got really excited." The students' comments became a source of affirmation for Tanya's role identity as storyteller, and these young women became agents of change for Tanya's professional practice. After transcribing the stimulated recall interview, Tanya wrote a brief story about this episode.

> **Tanya**: As part of a unit on immunology and disease I presented a seminar to my class about specific aspects of immunology that the students were striving to understand. After a brief instruction about antibodies, I decided to mention how antibodies were made to provide my students with a real-life context. My discussion about my research prompted one of my students to ask "So do you have a PhD?" to which I replied in the affirmative. Unsatisfied with my response

> the student continued, “How come you are not doctor?” to which I responded, “I am a doctor, I just choose to be Mrs. I am Dr Vaughan. That is my academic title.” At this point my whole class seemed awestruck and another student continued, “Can we call you Dr Vaughan?” I replied “Yeah you can call me Dr Vaughan as much as you like” the student responded with a joyful “Oh Yes!” I was quite surprised by this interest and enthusiasm in my qualifications and choice of title.
>
> This interaction re-ignited an internal debate about my title, which I had previously resolved through my decision to be Mrs. I recalled the discussion with one of my (former) fellow student teachers who was also a transitioning scientist in which he had said “…it is insanity not to use your professional education scientific titles which you have been bestowed with….” At the time I had agreed with the statement, interestingly now I had rejected this idea. I had chosen Mrs. rather than Dr. as I felt that part of me embracing my teacher identity was to let go of my PhD.

Tanya was comfortable enough in her new school to be identified as Mrs. Vaughan. This was a conscious decision to privilege her emerging sub-identity as teacher more than her former scientist sub-identity. Yet in teaching topics that were closely related to her former career, Tanya told first-hand stories to help her students appreciate the relevance of their classroom work. At these moments, and elsewhere through the observed lessons, Tanya’s scientist identity was in the foreground without jettisoning her teacher identity. Both identities existed simultaneously – she was telling students about her scientific work and showing them her scientific practices so the students could gain real-life insight into scientific work, in much the same way as Joel Mackay’s teacher had inspired him to become a scientist in the opening quote of our article. In her role of classroom storyteller, Tanya’s students exuded collective effervescence and Tanya’s role-identity was confirmed by their individual and collective comments and joyful expressions. As we know from the work of Collins (2004) and Turner (2002), these successful interactions are likely to reinforce this classroom practice of sharing relevant

stories about science and confirm Tanya's core self as a successful teacher, scientist, and person. The school has formally recognized Tanya's success over her first six months by appointing her as biology coordinator for the new-school year. This is likely to confirm further Tanya's core self.

All three lessons observed were either directly or indirectly related to Tanya's scientific interests. Science teachers in Australia are required to teach across the disciplines of science in the general or integrated science curriculum for Years 8-10. It will be interesting to study Tanya's classroom practices and her interactions with students when she teaches topics outside her field of expertise. We might expect her scientist sub-identity to be less prominent in such topics. Alternatively, Tanya's core self might lead her to compensate some how for her perceived lack of expertise and desire to tell relevant first-hand stories of science. Another issue worth studying is the extent to which her scientist sub-identity wanes over time. We hope to continue to investigate these issues with Tanya and other scientists-in-transition in our continuing narrative inquiry of professional transitions. At a theoretical level, we are interested in whether one needs to give up a sub-identity like a successful scientist to develop another sub-identity like a successful teacher, as Tanya seemed to suggest in her rationale for adopting her chosen teaching title of Mrs. at the expense of her scientific title of Dr. While this was a decision Tanya made before engaging in this writing project, we now suspect, as does Michael Bowen, that "there is a valuation of identities to others that cause some identities to have more primacy than others."

Susan Kirch appeared to make a number of assumptions about Tanya's reason for changing careers and our awareness of relevant sociological literature about identities

ascribed to women in science and teaching. Let there be no mistake. Tanya was a successful scientist who not only produced "new knowledge" in her international science community, but also had a promising scientific career ahead. In Tanya's words:

Tanya: *I changed because I no longer believed I was making a contribution to the world more significantly than through teaching, that other scientists would and could do the work I was doing. I felt that I could make a difference through teaching. When I left my boss told me that if I stayed he could see me going the whole way, running my own lab. This was a re-iteration of what I had heard on several occasions from the majority of the people with whom I had worked. As a woman, I did not feel that there was a glass ceiling in my field. I felt that if I had wanted it I could have run a very successful lab. I was not running away from science because of "difference" or a "deficiency", rather I had chosen to leave as I no longer found the work to be rewarding at a personal level.*

Susan Kirch also wondered, "if Tanya's 'increased confidence' as she 'backgrounds the self-doubts she once expressed' will be hard-won and easily eroded." Again, Tanya responds:

Tanya: *I did study the gendered contexts of women in teaching in my education degree, and I specifically chose to study it as part of my response to a sociology requirement. I did not feel that I was personally affected by the gendered context of women in science. As I have dealt with the complexities surrounding my vocational change, I feel that my confidence will be robust; as it does not depend on the opinions of others, rather it is found within my appreciation of the intrinsic rewards of teaching.*

Finally, Susan Kirch appeared to question the usefulness of Tanya's (narrative) interactions with her former classmates and professors, and her participation in this narrative inquiry more generally (cf. ontological authenticity). Perhaps the last words for now in this regard should go to Tanya.

***Tanya**: The paper has encouraged me to be more transparent about my negative teaching experiences. The sharing of negative teaching stories with trusted peers has opened up a space for colleagues to tell me their stories. Listening to my colleagues' negative stories has helped me to deconstruct my idealized notions of teaching practice and has enabled me to perceive my failures within a balanced perspective that acknowledges my successes. The commitment to be honest about my teaching practice has facilitated me to access the help I required to transition successfully into my new teacher identity.*

Through drafting the paper I identified my desire to perpetuate idealized notions of scientists and scientific practice. I have changed my practice and now strive to present my true perceptions of science. This perspective of science includes candidness about the high failure rate of experimental science, its competitive nature and the joy of the moments of serendipity and success. Discussing the full complexity of the nature of science is important, as I now realize that idealized notions are unsustainable for both the storyteller and the audience.

References

Brockmeier, J., & Harré, R. (1997). Narrative: Problems and promises of an alternative paradigm. *Research on Language and Social Interaction*, 30(4), 263-283.

Clandinin, D. J., & Connelly, F. M. (2000). *Narrative inquiry. Experience and story in qualitative research.* San Francisco: Jossey-Bass.

Collins, R. (2004). *Interaction ritual chains*. Princeton, NJ: Princeton University Press.

Elbaz-Luwisch, F. (1997). Narrative research: Political issues and implications. *Teaching and Teacher Education*, 13(1), 75-83.

Riessman, C. K. (2002). Narrative analysis. In A. M. Huberman & M. B. Miles (Eds.), *The qualitative researcher's companion* (pp. 217-270). Thousand Oaks, CA: Sage.

Turner, J. H. (2002). *Face to face. Toward a theory of interpersonal behavior*. Stanford, CA: Stanford University Press.

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